

REMARKS

Claims 1-38 remain in this application. Claims 1, 4, 14 and 27 have been amended. Claims 40-42 have been added. Claims 13, 26 and 39 were previously cancelled, without prejudice.

Claims 1-7, 14-20, 27-33 and 35-38 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Schulist (6,542,558) in view of Wang (6,526,531). These rejections are respectfully traversed.

The performance of a wireless communications system may be enhanced by providing coding to facilitate forward error correction. The coding process provides redundancy that the receiver may use to correct errors. Using a multi-slot packet configuration, the data bits and a portion of the redundancy bits may be transmitted to the receiver during an initial slot, followed by the remaining redundancy bits in additional slots. The data and redundancy bits may be combined and decoded jointly at the receiver. However, in relatively interference and/or noise free environments, the receiver may not require all the redundancy bits to decode the data bits and as a result may consume additional power to decode unnecessary redundancy bits. Moreover, the effective data rate of the transmission will be reduced. One method of preserving or increasing the data rate is to attempt decoding after every slot, test whether the decoding was successful, and terminate decoding once the bits have been successfully decoded. Although this method of early termination increases the effective data rate (since new packets may then be sent), the attempt to decode after every slot still results in high power consumption by the decoder. Thus, it is not desirable to base early termination methods upon attempts to decode after every slot.

Applicants have disclosed a novel and unobvious approach for achieving early termination of decoding, which does not require attempting to decode after every slot. This may be achieved by monitoring a quality metric of the transmission that is indicative of the interference and/or noise on the wireless channel, and attempting to decode the data bits with less than all of the redundancy bits only when the quality metric indicates that the interference and/or noise is low. In particular, an interval may be delimited in which the interference and/or noise is deemed too high to decode the data bits without all the redundancy bits. The interval is based on

a modified quality metric threshold which may be, by way of example, some threshold below the minimum SINR required to meet the quality of service requirements at the current data rate. In this example, the interval may be anything below that threshold. Decoding of the data bits without all the redundancy bits will only occur when the quality metric is outside the interval, e.g., above the threshold.

Referring now to the specific claims, Applicants submit that they recite subject matter which is neither disclosed nor suggested by art of record. Every claim in this case requires, either expressly or by way of reference, (1) “**delimiting an interval** in accordance with a modified quality metric threshold,” and (2) **decoding** the segment when the estimated quality metric is outside of the interval.” (emphasis added).


The Examiner takes the position that Schulist discloses Applicants’ invention except for the concept of delimiting an interval in accordance with the modified quality metric. Instead, the Examiner relies on Wang for this feature. According to the Examiner, Wang teaches early termination of decoding, and early termination is synonymous with delimiting. However, **delimiting an interval** that will be used to determine when to begin decoding is wholly different from **terminating** decoding once it begins. In fact, Wang teaches the traditional method of early termination, which involves decoding after every time slot. Accordingly, the combination of Schulist and Wang is insufficient to establish a *prima facie* case of obviousness, and Applicants respectfully request that this rejection be withdrawn.

**REQUEST FOR ALLOWANCE**

In view of the foregoing, Applicants submit that this application is now in condition for allowance. Accordingly, reconsideration and allowance are respectfully requested. Should any issues remain unresolved which the Examiner believes could be resolved in a telephone interview, the Examiner is requested to telephone the Applicant's undersigned attorney.

Respectfully submitted,

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